



# AVIATION

**+ Lifting-The-Barriers Roundtables**

PRELIMINARY PAPER

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## INTRODUCTION

The ten member states of the Association of Southeast Asian Nations (ASEAN) have laid down a 2015 deadline to establish an ASEAN Single Aviation Market (ASAM) for the liberalization of air transport services in the region. The aim is to have the ASAM in place by the time the proposed ASEAN Economic Community (AEC) takes effect in 2015.

This Report presents an overview of the barriers facing the aviation sector in ASEAN, including those related to the ASAM. It sketches out the policy changes required to overcome or lift these barriers, particularly the strategies that governments should undertake in the light of rapid changes to the aviation industry.

## A. THE BIG PICTURE: CHANGING AVIATION DYNAMICS

### Infrastructure Constraints

1. The face of ASEAN aviation is changing significantly. Low-cost carrier (LCC) operations now account for more than or nearly half of all airline capacity (international plus domestic) in the Philippines (61%), Indonesia (53%) and Malaysia (48%). The next highest LCC penetrations rates are 30% for Singapore, 29% for Thailand and 21% for Vietnam. This LCC share of capacity is expected to increase even more dramatically in the next decade. For sure, there is still ample room for growth in populous states like Indonesia, Vietnam and Thailand, while emerging Myanmar will grow strongly from a relatively low base. The vibrant intra-ASEAN and intra-Asia economic growth (compared to the lacklustre situation in the developed economies) has also meant increasing travel and exports within the region. A large proportion of such growth is being captured by the LCCs, and increasingly on long-haul sectors too.
2. In fact, LCC operations have proven to be consistent, all-weather growth generators for airports in ASEAN. In 2009, recognized as a tough year for aviation worldwide, growing LCC traffic was a resilient feature in all leading ASEAN airports. For instance, Singapore Changi Airport saw passenger traffic and aircraft movements grow robustly on the back of LCC operations, even as the shares contributed by long-haul flights and full service carriers (FSCs) slip. In 2009 alone, LCC passenger traffic and aircraft movements at Changi increased a dramatic 50% over the previous year. Such momentum has continued well into the present.
3. Yet, ASEAN governments on the whole do not appear to have made adequate systemic changes to their policies to accommodate this phenomenon. In particular, the infrastructure needs of LCCs are not being addressed quickly enough. Airports or terminals dedicated to LCC operations remain the exception in ASEAN. Some governments are continuing to spend large amounts of money to build new airports or terminals mainly for traditional FSCs. This is often borne out of the belief that the “hub” status of major airports must be protected by reinforcing the operations of FSCs, particularly the national carriers. Policies intended to encourage or spur LCC travel by making it more cost-efficient and accessible are also lacking, e.g. reduced airport and user charges and passenger taxes.
4. Other governments are not investing adequately in airport infrastructure, be this for FSCs or LCCs. Major airports like Jakarta Soekarno-Hatta, Manila Ninoy Aquino and Bangkok Suvarnabhumi have reached saturation point and even exceeded their intended capacity. This has naturally resulted in increasing congestion and longer delays. The re-opening of Bangkok Don Mueang Airport to cater largely to LCC operations is a reminder of the infrastructural constraints posed largely by LCCs’ spectacular growth. Such constraints will pose even more of a problem in the near future, particularly as the LCC “boom” continues. This is made more acute by the fact that LCCs typically operate smaller planes that make more take-off and landing frequencies in a day.
5. Recent “giant” aircraft orders by LCCs compound the problem. The Lion Air and AirAsia groups alone have more than 1,000 aircraft on order between them. Other LCCs like Cebu Pacific, Tigerair, Nok Air and Jetstar are expanding as well. New LCC subsidiaries like Malindo, Philippines AirAsia, Tiger Mandala and VietJet Air have also started operations. With increasing market access liberalization within ASEAN, most of the new planes on order will end up servicing ASEAN skies. Quite apart from whether the skies are truly open, there is a huge gap between aircraft orders and infrastructure expansion efforts.
6. Governments must thus pay more attention to airport capacity investments, particularly those relevant to LCC operations. Airport competition and connectivity issues require forward planning, and not just with FSC considerations in mind. A significant re-think is required on issues like secondary airports (e.g. Bangkok Don Mueang,

Manila Clark, Jakarta Halim Perdanakusuma) and budget terminals (e.g. KLIA 2) to relieve the congestion at primary airports. Securing private sector financing for such facilities should be a priority. At the same time, governments should provide for lowered airport charges to incentivize airlines to relocate to these facilities.

### Human Capital Constraints

7. The projected growth in aviation will also impose tremendous pressure on the provision of pilots and maintenance personnel. The industry projects that the Asia-Pacific region alone will require 185,000 more pilots and 243,500 maintenance personnel for the next 20 years.
8. The region will thus benefit tremendously from a harmonized programme for pilot training and licensing. Training centres should receive common accreditation to ensure harmonized standards and quality. The ASAM project should look into such issues in a manner similar to (but not necessarily identical with) the European Union (E.U.). Overall, the demand for aviation professionals should be managed and met on a regional, rather than national basis. This way, manpower can be positioned anywhere in the region as market demand dictates, with commonly-agreed certification standards recognized by all ASEAN member states. This reduces costs for airlines, governments and the individuals concerned (e.g. trainee pilots) and increases efficiencies all around.

### An ASEAN Regulator

9. Moving forward, the ASAM project should steer the region toward having an ASEAN regulator to oversee technical matters. Initially, such a body might take the form of a Joint Aviation Committee comprising the civil aviation authorities of member states. Eventually, it could mature into an independent administration with a regional mandate.
10. The regulator would be in charge of legislating and enforcing harmonized standards relating to air traffic management (ATM), safety, security and other technical matters in line with the requirements of the International Civil Aviation Organization (ICAO). As a first step, the standards need not be uniform, but harmonized to a sufficient degree so as to afford co-operation in cross-border enforcement. For example, a harmonized set of safety rules can be applied to airlines by

all member states' national authorities, and an inspection conducted by one authority should be accepted by the others as adequate. Regional co-operation in customs, immigration and quarantine (CIQ) procedures can also be enhanced to combat problems like human trafficking. Of course, this requires the necessary "levelling-up" of resources and capabilities across all ASEAN member states.

11. In sum, harmonized standards and/or an independent regulator have the advantages of increasing the reliability of monitoring and compliance, reducing duplication and costs, and enhancing the overall effectiveness of the system.

### The Environment and Future Sustainability

12. The region should also move toward having harmonized requirements on contemporary issues such as aircraft carbon emissions. The linkage between aviation and climate change has already emerged as a controversial issue with the E.U. unilaterally subjecting aviation to its Emission Trading Scheme (ETS). Issues relating to the sustainable growth of the industry also require a concerted stand or strategy. Such issues include the use of biofuels and alternative construction material for aircraft and aircraft parts.

### A United Stand for External Relations

13. The above issues highlight a critical need for an increasingly integrated ASEAN to craft a common external policy for aviation matters. This involves coordinating the individual member states' positions to reach a united negotiating stand. Such a move will strengthen the member states' collective position when negotiating with bigger trading partners such as China, India, the E.U. and the U.S. As noted above, one issue to strike a common stand for is aircraft carbon emissions. Another critical area for such a stand (see below) is for negotiating market access rights with other countries.

## B. THE ASAM AND MARKET ACCESS BARRIERS

14. In the more immediate term, ASEAN has its ASAM or “open skies” ambition for implementation by 2015 in line with the AEC. To this end, the ASEAN member states have already adopted three multilateral agreements designed to provide unlimited third, fourth and fifth freedom operations within the region. Hence, state parties to those agreements agree to provide for the following operations to become unlimited or unconstrained in frequency, capacity and aircraft type used:

- i. “Third freedom” - the right of a carrier designated by State A to carry passengers, cargo and baggage for profit from a point in State A to a point in State B.  
*Example: Thai Airways’ (TG) operation from Bangkok to Singapore, or Phuket to Bali, or Chiang Mai to Hanoi.*

- ii. “Fourth freedom” - the corresponding right in the reverse direction.  
*Example: The same TG flight returning from Singapore to Bangkok, or Bali to Phuket, or Hanoi to Chiang Mai.*
- iii. “Fifth freedom” - the same right but with an additional right to make a stopover in State C to discharge and take on new traffic for profit.  
*Example: TG operation between Bangkok and Singapore, but with a stopover in Kuala Lumpur in both directions to discharge and take on traffic*

15. The ASEAN multilateral agreements, their scope and the state parties are as follows:

MULTILATERAL AGREEMENT	SCOPE	STATE PARTIES
<b>2009 Multilateral Agreement on Air Services (MAAS)</b>		
Protocol 5	Unlimited third & fourth freedom between capital cities (A’s carriers between A’s capital and another capital) <i>E.g. Thai Airways’ (TG) Bangkok-Hanoi &amp; vice versa</i>	All <u>except</u> Indonesia and the Philippines
Protocol 6	Unlimited fifth freedom between capital cities (A’s carriers from A’s capital to C’s capital via B’s capital) <i>E.g. TG’s Bangkok-Kuala Lumpur-Singapore &amp; vice versa</i>	All <u>except</u> Indonesia and the Philippines
Protocols 1 to 4	Limited impact: covering mainly secondary cities in growth areas (sub-regions) straddling borders of neighbouring states. <i>E.g. Cambodia, Laos, Myanmar and Vietnam (CLMV) Agreement</i>	All 10 member states

MULTILATERAL AGREEMENT	SCOPE	STATE PARTIES
<b>2010 Multilateral Agreement for the Full Liberalization of Passenger Air Services (MAFLPAS)</b>		
Protocol 1	Unlimited third & fourth freedom between all cities (A's carriers from A's capital to B's non-capital, A's non-capital to B's capital & A's non-capital to B's non-capital) <i>E.g. TG Bangkok-Cebu, Phuket-Manila, Phuket-Cebu</i>	All <u>except</u> Indonesia, Cambodia and Lao PDR
Protocol 2	Unlimited fifth freedom between all cities (except capital-capital-capital) <i>E.g. TG Phuket-Ho Chi Minh-Cebu, Phuket-Ho Chi Minh-Manila, Phuket-Hanoi-Cebu, Phuket-Hanoi-Manila, Bangkok-Hanoi-Cebu, Bangkok-Ho Chi Minh-Manila, Bangkok-Ho Chi Minh-Cebu</i>	All <u>except</u> Indonesia, Cambodia and Lao PDR
<b>2009 Multilateral Agreement for the Full Liberalization of Air Freight Services (MAFLAFS)</b>		
Protocol 1	Unlimited third, fourth and fifth freedom between designated points <i>E.g. Thai Airways Cargo's Bangkok-Clark, Bangkok-Vientiane-Hanoi routes</i>	All <u>except</u> Indonesia
Protocol 2	Unlimited third, fourth and fifth freedom between all points with international airports <i>E.g. Thai Airways Cargo's Bangkok-Singapore, Bangkok-Singapore-Manila routes</i>	All <u>except</u> Indonesia

### Indonesia Yet to Accept ASEAN Agreements

16. One major barrier for the above agreements is the fact that several member states, namely Indonesia, the Philippines, Cambodia and Lao PDR have yet to ratify one or all of them. In particular, Indonesia has not accepted any of the three agreements. The Indonesian government is reluctant to ratify these agreements because it continues to be lobbied by its carriers to continue protecting their international markets. These carriers' principal concern is that the stronger airlines from neighbouring states (both FSCs and LCCs, particularly from Singapore, Malaysia and Thailand) will dominate these markets.
17. Indonesia takes this position despite compelling economics-based evidence that liberalization brings significant benefits to the overall economy. In particular, the travelling public and exporters enjoy more competition among providers and therefore increased choices and lower fares and freight rates. In addition, there are significant indirect benefits for tourism, travel-related businesses and inward foreign investment. While the local airlines are likely to lose market share as a result of increased access for foreign carriers, they

will also benefit on the whole from a significant increase in volumes carried and revenues generated.

18. On their part, the authorities in the individual Indonesian provinces (i.e. the local governments) have realised that their local economies will benefit greatly from increased connectivity to key cities in the region. They have thus been a countervailing force to the airlines and have lobbied the central government to open up further access to the region.
19. To address Indonesia's concerns, the ASEAN Secretariat, the member states and their carriers must continue to engage the Indonesian government and carriers to encourage them to accept the ASEAN agreements. Co-operative ventures with Indonesian carriers (e.g. code-sharing, joint ventures) should be encouraged so as to provide incentives for these carriers to support ASEAN's liberalization moves. In time, as Indonesian carriers such as Garuda and Lion become more competitive and grow their own overseas operations, they will require greater access into other ASEAN states as well.

### **Seventh Freedom and Domestic Operations Remain Prohibited**

20. A further problem with the ASAM is that it stops with third, fourth and fifth freedom relaxations. Seventh freedom and domestic operations by foreign carriers is not yet contemplated. For example, a Thai carrier cannot connect a point in Malaysia and a point in Indonesia without the flight originating and terminating in Thailand. Similarly, it cannot connect two domestic points within Indonesia. The ASAM is thus incomplete and risks being “single” only in name. The result is that airline operations remain restricted by artificial barriers erected by governments, despite the economic justifications for lifting such barriers. The true potential of airlines and the economic growth they can stimulate by carrying more passengers and cargo at more efficient cost remain unrealised.
21. One short-term solution is for member states to be tolerant of fifth freedom operations (i.e. A’s carrier operating from A to B to C), even if they resemble seventh freedom operations. To illustrate, if a Thai carrier operates from Bangkok to Singapore via Hanoi, the routing will effectively resemble a seventh freedom operation for the Hanoi-Singapore sector. This is because it is unlikely for passengers from Bangkok to take the circuitous route via Hanoi to Singapore. All passengers from Bangkok will effectively be bound for Hanoi and disembark there, to be replaced by a fresh load of passengers bound for Singapore.
22. Such operations are technically permitted by the ASEAN agreements since there are no directionality or capacity conditions. As they are wholly consistent with ASAM’s liberalizing spirit, all member states should approve when the airlines request authorization for such operations. Indeed, the member states should adopt an interpretation of the agreements to allow such operations explicitly.
23. The ASEAN member states should also continue to work toward phasing out seventh freedom restrictions totally, as well as to allow domestic carriage in progressive, gradual phases. This Report recommends a phased timetable to allow the commencement of seventh freedom and domestic services by ASEAN carriers, beginning with points that are hitherto not connected by direct flights, points that are not capital cities, and eventually points that are capital cities. Recognizing the political difficulties involved, where domestic carriage is contentious and threatens to derail liberalization of seventh freedom operations, the

latter should take priority. In other words, domestic carriage can be left for a later period while seventh freedom should be regarded as more urgent.

### **ASEAN Carriers Will Be Disadvantaged Against Carriers from Outside the Region**

24. Maintaining the seventh freedom restrictions, in particular, will cause the region’s carriers to lose out to carriers from outside the region. This is another reason why such restrictions must be progressively removed. To illustrate, ASEAN has already adopted an Air Transport Agreement (ATA) with China that seeks to replace the individual air services agreements that member states have with China. This ATA provides for unlimited third and fourth freedom operations for carriers from both sides. This means that a Philippine carrier can have unlimited penetration into all Chinese points, but only from points in the Philippines. Conversely, a Chinese carrier can connect all points in its own “backyard” (China) with all points in ASEAN member states that have accepted the ATA. This is possible because the Chinese carriers have a unified backyard of their own, while the ASEAN carriers simply do not.
25. This presents a serious network imbalance that can only be rectified by the ASEAN states turning their own backyard into a true common market. In other words, the Philippine carrier must be allowed to connect Vietnam, Thailand, Indonesia and all of ASEAN with China. To do this, the ASEAN member states must grant each other’s carriers the seventh freedom to connect two points outside the carrier’s home state.
26. Hence, the internal market within ASEAN must first be complete and meaningful before the region starts negotiating with its trading partners. This problem highlights ASEAN’s lack of a united negotiating stand when it engages third countries. The problem is complicated because ASEAN lacks a mechanism like that which exists in the E.U. to compel member states to prioritize the regional interest over national, individual interests. Also, the region’s biggest economy (and thus natural leader for ASEAN’s negotiations with trading partners), Indonesia, remains reluctant to embrace intra-ASEAN liberalization. At its core, the problem has to do with the uneven level of development and competitiveness among member states and their airlines.
27. While complex, this is a problem that must be redressed before the region and its airlines

lose their relative competitiveness and become disadvantaged against airlines from outside the region. This is a risk that governments and carriers in the region cannot continue to ignore.

### C. THE ASAM AND OWNERSHIP AND CONTROL BARRIERS

28. To add to the market access barriers, ownership and control restrictions remain as well. In ASEAN member states, airlines must subscribe to the traditional “substantial ownership and effective control” rule. In effect, this means that all carriers must be majority-owned (beyond 50%) by nationals of their designating state. Foreign interests are thus restricted to a minority share of no more than 49% of shareholding. In some states like the Philippines, the foreign investor’s share is capped at an even lower level of 40%.
29. Such rules hamper or pose disincentives for raising capital from across the region to establish new airlines or to re-capitalize existing ones. With some exceptions, most foreign investors are reluctant to invest in airlines unless they can own a majority or controlling interest. As such, the rules hurt airlines in developing member states that especially need more foreign investments in their airlines.
30. The ASEAN agreements provide for alternative ownership and control regimes. In particular, they lay the ground for the ASEAN Community Carrier, in which majority ownership can lie in the hands of all ASEAN nationals taken together. Hence, a Cambodian-registered carrier need not be majority-owned by Cambodians, but can be owned by 20% Cambodian, 20% Malaysian and 11% Vietnamese interests. The majority ownership can be spread out among ASEAN interests as long as effective regulatory control (e.g. for safety and security matters) remains with the Cambodian authorities. This is a welcome innovation that provides incentives for capital to be raised region-wide for the airline sector.
31. However, the ASEAN agreements also provide that the individual member states retain the right to reject the designation of a Community Carrier that wishes to operate to it. In other words, any ASEAN member state can withhold market access rights from the above Community Carrier. This is ostensibly to allow the member state to continue protecting its own airlines. This robs the ASEAN agreements of their liberalizing intent.
32. One way to lift this barrier is for member states to retain the traditional “substantial ownership and effective control” rule for their own carriers only, if they so wish. For other ASEAN carriers, the community model should be allowed and welcomed, with no threat of market access being denied. This will reassure airline investors of the community carrier’s long-term sustainability. Eventually, all restrictions on ownership and control by ASEAN nationals, even for member states’ own airlines, should be phased out. This can only be logical for a true “single” aviation market.
33. In sum, liberalization of market access and of ownership/control rules must naturally be pursued as a package. It would be meaningless for ASEAN to provide for a community carrier (that is owned by a multitude of ASEAN interests) if this carrier’s market access to points in ASEAN can be constricted by individual states.

## CONCLUSION

Policy-makers must seize the opportunity to re-think their strategies for ASEAN aviation. In the face of the rapidly-changing dynamics of the sector, the following priorities should guide policy-making for the future:

- Facilitating cost reduction and efficiencies for all airline operations, FSC and LCC

- Committing to overcome infrastructural and human capacity constraints
- Continuing to liberalize market access and ownership/control rules
- Establishing an ASEAN regulator to oversee and enforce harmonized standards
- Fostering a united ASEAN negotiating stand vis-a-vis other countries and regions

## REGIONAL PROFILE OF ASEAN AVIATION

**ASEAN member states: population and international market size (by weekly seat capacity involving all international points and all carriers)**

Member State	Population (in millions)	Seats per week
Singapore	5	1,267,858
Thailand	69	1,119,984
Malaysia	28	830,825
Indonesia	240	573,590
Philippines	93	394,489
Vietnam	87	330,038
Cambodia	14	93,650
Myanmar	48	48,444
Brunei	0.4	40,100
Lao PDR	6	14,640
Total	590.4	4,713,618

**Note:** Capacity data based on seats for week commencing 16 April 2012. Domestic capacity excluded. Population from World Bank estimate (2010)

**Source:** CAPA - Centre for Aviation, Innovata & World Bank

**ASEAN member states: overall aviation market size (international and domestic) and LCC penetration - data from week of 7 - 13 January 2013**

Rank	Country	System-wide weekly capacity (millions of seats, all carriers local and foreign)	System-wide LCC penetration rate	Domestic LCC penetration rate	International LCC penetration rate
1.	Indonesia	2.5	53%	57%	42%
2.	Thailand	1.7	29%	58%	18%
3.	Malaysia	1.4	48%	49%	48%
4.	Singapore	1.4	30%	Not Applicable	30%
5.	Philippines	1.0	61%	84%	35%
6.	Vietnam	0.7	21%	29%	14%
7.	Cambodia	0.1	12%	0%	13%
8.	Myanmar	0.1	13%	0%	22%
9.	Lao PDR	0.06	8%	0%	10%
10.	Brunei	0.04	16%	Not Applicable	16%

**Source:** CAPA - Centre for Aviation & Innovata

**ASEAN flag carriers: weekly seat capacity, fleet size and home market share - as of 1 May 2013**

Rank	Country	Weekly seats	Number of aircraft	% of international seat capacity
1.	Singapore Airlines	546,000	126	40%
2.	Malaysia Airlines	538,000	133	29%
3.	Thai Airways Int'l	532,000	103	30%
4.	Garuda Indonesia	478,000	88	16%
5.	Vietnam Airlines	385,000	83	39%
6.	Philippine Airlines	298,000	65	24%
7.	Lao Airlines	32,000	21	43%
8.	Royal Brunei Airlines	29,000	10	72%
9.	Cambodia Angkor Air	22,000	5	15%
10.	Myanmar Airways Int'l	15,000	7	16%

**Note:** Domestic operations included. The figures include those of SilkAir (Singapore Airlines), Firefly and MASWings (Malaysia Airlines), Thai Smile (Thai Airways) and PAL Express (Philippine Airlines). Budget/LCC airline subsidiaries are excluded. Weekly seats rounded to nearest 1,000.

**Source:** CAPA - Centre for Aviation, Innovata and CAPA Fleet Database

**ASEAN Low-Cost Carriers (LCC): weekly seat capacity within Southeast Asia and capacity share by LCC group - data from week of 8 - 14 July 2013**

Rank	Carrier	Weekly seats	Capacity share (as % of total LCC seats)
1.	Lion Air	1,026,000	35%
2.	AirAsia	936,000	32%
3.	Cebu Pacific	300,000	10%
4.	Tigerair	162,000	6%
5.	Citilink (Garuda)	136,000	5%
6.	Nok (THAI)	131,000	5%
7.	Jetstar	110,000	4%
8.	VietJet	60,000	2%
9.	Golden Myanmar	15,000	<1%
10.	Orient Thai	9,000	<1%

**Note:** Only LCC subsidiaries and affiliates included. Full-service subsidiaries (i.e. Batik Air) excluded from Lion Air figures. AirAsia capacity includes AirAsia Berhad (Malaysia), Thai AirAsia, Indonesia AirAsia, Philippines AirAsia and Zest Air. Weekly seats rounded to nearest 1,000.

**Source:** CAPA - Centre for Aviation, Innovata

**Top 10 international LCC routes based on weekly return capacity (seats) – week of 18 - 24 February 2013  
(with intra-ASEAN routes highlighted)**

Rank	Origin Airport	Destination Airport	Total Seats
1.	Singapore Changi	Kuala Lumpur International	63,844
2.	Singapore Changi	Jakarta Soekarno-Hatta	45,612
3.	Kuala Lumpur	Jakarta Soekarno-Hatta	31,626
4.	Dubai International	Kuwait International	27,432
5.	Singapore Changi	Bangkok Suvarnabhumi	26,076
6.	Manila Ninoy Aquino	Singapore Changi	24,298
7.	Dubai International	Doha International	23,814
8.	Kuala Lumpur	Bangkok Don Mueang	22,680
9.	Dublin	London Stansted	17,388
10.	Geneva	London Gatwick	17,304

Source: CAPA – Centre for Aviation & Innovata

**ASEAN LCC's: Projected fleet growth by individual carrier**

Rank	Carrier	Country	End 2012 fleet	Projected end 2013 fleet	Remarks
1.	Lion Air	Indonesia	91	97	Lion Group has 600 on order beyond 2013
2.	AirAsia Berhad	Malaysia	64	74	AirAsia Group has 387 on order beyond 2013
3.	Cebu Pacific	Philippines	41	48	
4.	Wings Air (Lion)	Indonesia	28	40	
5.	Thai AirAsia	Thailand	27	34	
6.	Indonesia AirAsia	Indonesia	22	30	
7.	PAL Express (PAL)	Philippines	22	22	
8.	Citilink (Garuda)	Indonesia	21	about 30	
9.	Tigerair	Singapore	20	20	
10.	Jetstar Asia	Singapore	16	17 to 19	
11.	Zest Airways	Philippines	15	11	
12.	AirAsia X	Malaysia	11	18	
13.	Nok (Thai Airways)	Thailand	10	13	
14.	VietJet	Vietnam	5	10	
15.	Jetstar Pacific	Vietnam	5	6 to 8	
16.	Mandala (Tiger)	Indonesia	5	12	
17.	SEAir	Philippines	5	5 to 7	
18.	Orient Thai	Thailand	4	4	
19.	Scoot (SIA)	Singapore	4	5	
20.	Valuair (Jetstar)	Singapore	2	2	
21.	Philippines AirAsia	Philippines	2	2 to 5	
22.	Golden Myanmar	Myanmar	0	about 5	
23.	Malindo (Lion)	Malaysia	0	about 12	
	TOTAL		420	about 520	

**Note:** Rank based on current fleet size. List based on individual carrier/AOC rather than Group. Affiliated parent group, if any, indicated in brackets.

Source: CAPA – Centre for Aviation fleet database and company reports



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